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MAMMALS COLLECTED BY THE ROCKEFELLER-MURPHY EXPEDITION TO TANGANYIKA TERRITORY AND THE EASTERN BELGIAN CONGO

BY ROBERT T. HATT[1]

Messrs. J. Sterling Rockefeller and Charles B. G. Murphy, assisted by Mr. Allen L. Moses, conducted an expedition to Africa for the American Museum in 1928 and 1929. The expedition had a number of ends in view but foremost was a survey of the avifauna of the Marungu region, southwest of Lake Tanganyika. Incidentally a number of mammals were secured and added to the American Museum collection, and it is on these that the following report is based. There were three principal areas represented and the mammals of these are treated separately below.

The Tanganyika portion of this collection is of interest in its further delineation of the range of the smaller mammals in the northern part of the Territory. It is to a large extent complementary to the collections made by expeditions from the Berlin Museum and the excellent series of mammals obtained by Arthur Loveridge which have formed the basis of several highly valuable contributions to the fauna of this Territory.

The Marungu collection is of greater importance inasmuch as it represents a section of the Congo fauna but poorly represented in any museum. Other than the small collections of Böhm and de Witte, there appear to be no series of mammals preserved from this highland. Specimens from Mount Kandashomwa demonstrate a southward extention of the Kivu fauna with certain intermingling of elements from other regions. Specimens taken in the Kivu district are in every case useful additions to the American Museum collection, since they in no case duplicate series previously obtained in that area by other museum expeditions.

MEASUREMENTS.—All external measurements quoted are as taken by the collectors from the fresh specimens; in the usual order: total length × tail vertebrae × hind foot with claw × ear from notch. Measurements of specimens are in millimeters.

I.—THE TANGANYIKA COLLECTION

Crocidura occidentalis kijabae (Allen)

Crocidura kijabae ALLEN, 1909, Bull. Amer. Mus. Nat. Hist., XXVI, p. 173. Type locality: Kijabe, Kenya Colony.

Represented by a single specimen, skin only, from the rim of Ngorongoro (7500 feet).

The pelage of the back has the strong chestnut-brown suffusion of the Kenya subspecies, but unlike the type of *kijabae* or other representatives in the American Museum, this specimen is very light below, in fact strongly silver when the angle of vision is from the front. In the matter of lighter under surface this specimen resembles *C. n. kivu*, with which race G. M. Allen has identified (1933, Bull. M. C. Z., LXXV, No. 2, p. 58) specimens from the Uzungwe Mountains of Tanganyika and from Ukerewe Island, Lake Victoria.

MEASUREMENTS.—Adult ♀. 197 × 72 × 23.

Claviglis microtis (Noack), subspecies

Eliomys microtis NOACK, 1887, Zool. Jahrb., Syst. Abt., II, p. 248. Pl. IX, figs. 19–22. Type locality: Qua Mpala (= Pala), Marungu. Type: B. Z. M. 6313.

Two specimens from the Old Mbulu

[1] In part a contribution from the Cranbrook Institute of Science.

Reserve, one taken at 5500 feet, one at 6000 feet. Both are adults, one a male, one a female.

These two specimens resemble *Claviglis microtis* more than any other named species, but are unlike the typical form in their darker grayer color, lack of conspicuous mid-dorsal line, and somewhat heavier tail. Specimens usually referred to *microtis* exhibit great variation in pelage and it is deemed unwise, in the absence of a good series of specimens from the Marungu, to name these specimens from Tanganyika as representatives of a new subspecies.

CRANIAL MEASUREMENTS.—Adult ♀. Greatest length, 26.8; condylo-incisive length, 23.6; zygomatic breadth, 14.6; interorbital constriction, 4.6; greatest length of nasals, 10.6; breadth palate across M^1, 5.9; length of bullae, 7.7; length upper tooth row, 3.4.

Lophuromys a. aquilus (True)

Mus aquilus TRUE, 1892, Proc. U. S. Nat. Museum, XV, p. 460. Type locality: Mt. Kilimanjaro.

There is a single adult male from the rim of Ngorongoro (7500 feet).

Lemniscomys dorsalis maculosus (Osgood)

Arvicanthis dorsalis maculosus OSGOOD, 1910, Field Museum Nat. Hist., Pub. No. 143, Zool. Ser., X, No. 3, p. 17. Type locality: Voi, British East Africa.

Represented by a skin, without skull, from the Old Mbulu Reserve.

These mice appear to be rare in Tanganyika Territory, for collectors of large series of other species of grass rats have obtained these in very small numbers. This is the first specimen of the *dorsalis* group to reach the American Museum.

Rhabdomys pumilio diminutus (Thomas)

Isomys pumilio diminutus THOMAS, 1892, Proc. Zool. Soc. London, p. 551. Type locality: Mianzini, east of Lake Naivasha, Kenya Colony.

Represented by the skins and skulls of two adult males, from the rim of Ngorongoro, at 7500 feet.

Praomys jacksoni octomastis, new subspecies

TYPE.—American Museum of Natural History No. 55718. Original No. 1. Female adult. Collected at 6000 feet in the Old Mbulu Reserve, Tanganyika Territory, November 28, 1928, by Messrs. Rockefeller, Murphy and Moses. The specimen is a study skin with skull. The pelage is somewhat worn, and a small area of the abdominal pelage has slipped. The skull, with well-worn molars, lacks both malar bones.

PARATYPES.—There are four paratypes, three of which are also topotypes. The other was taken nearby at 5500 feet. One is an adult female, one a subadult female, two subadult males. They bear American Museum numbers: 55702, 55715, 55716 and 55717.

CHARACTER.—This may be considered a geographical representative of *P. jacksoni*, the typical form of which it resembles in general appearance, the presence of the outer tubercle of the first lamina of M^1, and large ears. Its only noteworthy point of divergence from the surrounding subspecies is the mammary formula which is 2–2 = 8, instead of the usual 1–2 = 6. From *P. j. melanotus* it further differs in its generally lighter color, particularly marked on the under surface. From *P. j. peromyscus* it is distinguished by the mastological formula, smaller size and shorter tail.

MEASUREMENTS.—Collector's measurements of the type and adult paratype (55717) follow: total length, 240 mm. (233); tail vertebrae, 130 (124); hind foot, 22 (22); ear (13). The foot measurements appear to have been made WITHOUT claw as the dry foot measurement of each of these is nearer 23 mm.

Cranial measurements of the type are: greatest length, 29.0 mm.; condylo-incisive length, 26.0; breadth brain case, 11.2; interorbital breadth, 4.6; length of nasals, 11.7; width zygomatic plate, 3.2; palatilar length, 12.5; length palatal foramina, 5.7; length bullae, 4.8; breadth palate across M^1, 5.7; length upper molar row, 4.4; width M^1, 1.4.

This new form appears to be the only representative of the genus in which the mammary formula diverges from the typical 1–2 = 6.

Thamnomys (Grammomys) surdaster surdaster Thomas and Wroughton

Thamnomys surdaster THOMAS AND WROUGHTON, 1908, Proc. Zool. Soc. London, 1908, p. 550. Type locality: Zomba, Zambesia.

Represented by the skin and skull of a male taken near the Mbulu Reserve, at 6000 feet altitude.

Mastomys coucha victoriae (Matschie)

Mus (Epimys) microdon victoriae MATSCHIE, 1911, Sitz. Ber. Gesel. naturf. Freunde, Berlin.

Nr. 8, p. 342. Type locality: Muansa, south coast of Victoria-Nyanza, German East Africa.

Represented by seven skins with skulls, five of them males, two of females, from the Mbulu region, 5500 to 6000 feet.

Leggada bella bella Thomas

Leggada bella THOMAS, 1910, Ann. Mag. Nat. Hist., (8) V, p. 87. Type locality: Machados, British East Africa.

Represented by two skins and skulls of immature specimens from near Mbulu, 5500 and 6000 feet.

Leggada birungensis (Lönnberg and Gyldenstolpe)

Mus birungensis LÖNNBERG AND GYLDENSTOLPE, 1925, Arkiv för Zoologi, Band 17 B. N:o 5, p. 5. Type locality: Mt. Mikeno, Birunga Volcanoes, altitude 3400 meters.

A single specimen of this little-known mouse, probably the third specimen in any museum, was secured at 6000 feet in the Old Mbulu Reserve, December 1. From a specimen (Musée du Congo Belge, R. G. No. 12029) taken at Lulenga, Kivu (virtually a topotype), this specimen differs in its paler, more cinnamon dorsal coloration, its brown, instead of grayish hind feet, and the greater intensity and extent of the cinnamon underwash. In the Tanganyika specimen this latter is of general occurrence from the pectoral to inguinal regions.

The collector's measurements are 126×63×16×6.

Mammae appear to be 3–2 = 10.

The degree of color differentiation between this Mbulu specimen and the Lulenga skin is so striking that I would have considered them racially distinct were it not that the original description defines the dorsal coloration of the Tanganyika individual better than it does that from Lulenga.

II.—MARUNGU COLLECTION

Helogale u. undulata (Peters)

Herpestes undulatus PETERS, 1852, Reise nach Mossambique, p. 114, Pl. XXV. Type locality: Quitangonka, Mosambique, latitude 10–15° south.

Represented by four skins with skulls, an adult male and two adult females from Kenyemba, Marungu (3800 feet), and a subadult male from Kinya, Marungu (4100 feet). The species is new to the American Museum collection.

MEASUREMENTS.—Collectors' measurements of the larger male are 430 × 155 × 55 × 13. Those of the larger female are 406 × 145 × 52 × 10. Cranial measurements of the most perfect skull, a female from Kenyemba, are: condylo-incisive length, 52.0; zygomatic breadth, 29.7; breadth brain case, 23.8; breadth across orbital processes, 16.5; least interorbital breadth, 10.9; palatilar length, 25.3; length bullae, 13.0; width bullae, 8.2; length premolar-molar row, 13.6; length of pm^4 on outer edge, 4.1; greatest diameter pm^4, between lines parallel to the median, 4.5.

Lack of other material of this species does not permit subspecific identification of these specimens. The species appears to have been hitherto unreported in the Congo, and it may well be that the range of the species does not extend further north or west in this country than the Marungu highlands.

Heliosciurus rhodesiae rhodesiae (Wroughton)

Funisciurus annulatus rhodesiae WROUGHTON, 1907, Manchester Memoirs, LI (1907), No. 5, p. 15. Type locality: road to Chewalla's, west of Ndola, Northern Rhodesia, altitude 4000 feet.

Represented by a single specimen, an adult male, skin with skull, from Celandi, Marungu, altitude 3600 feet.

The Marungu representative of the genus, as might be presupposed from the nature of the country, is of the light gray type with long hair, similar to that reported from the hills of Northern Rhodesia, though with somewhat less white than exhibited by typical *rhodesiae*. It agrees well, except for its shorter tooth row (8.3 mm. as contrasted to 10 mm.), with the specimen reported by Allen and Loveridge (1933, Bull. M. C. Z., XXV, p. 92) from Kitungulu, near the southeastern end of Lake Tanganyika. Our specimen appears to be the

first reported from the Congo. It is also the first specimen of the subspecies to reach our collections.

MEASUREMENTS.—Collector's measurements of this specimen are 408 × 220 × 47 × 12. Cranial measurements are: condylo-basal length, 42.6; zygomatic width, 28.2; median length of nasals, 13.6; width of palate across M^1, 11.5; length upper tooth row, 8.3.

Paraxerus cepapi yulei (Thomas)

Funisciurus yulei THOMAS, 1902, Proc. Zool. Soc. London, 1902, p. 120. Type locality: Muezo, near Lake Mueru.

Represented by an old adult female, skin with skull from Kenya, Marungu, 4100 feet, the first in American Museum collections.

The type locality of *P. c. yulei* and the source of the specimen here reported lie, in a general way, between the type locality of another race, *P. c. quotus* ("Katanga District") and Kasanga, on Lake Tanganyika, the source of a specimen listed by Allen and Loveridge (1933, Bull. M. C. Z., XXV, p. 98) under the name of the Katanga subspecies. The Marungu specimen agrees well with the original description of *P. c. yulei*, which is similar to or identical with the later named subspecies from Angoniland, Southern Nyassa, *P. c. soccatus* Wroughton.

This specimen, taken April 12, appears to have been nursing. There are three pairs of mammae: one thoracic, one abdominal, one inguinal.

MEASUREMENTS.—Field measurements are: 298 × ? × 44 × 12. Cranial measurements are: greatest length, 43.4; condylo-basal length, 40.8; zygomatic breadth, 26.5; width across post-orbital processes, 18.5; greatest length nasals, 12.0; least width nasals, 4.9; posterior breadth nasals, 6.0; length tooth row, including pm^3, 9.7.

Tamiscus boehmi boehmi (Reichenow)

Sciurus boehmi REICHNOW, 1886, Zool. Anz., Nr. 223, pp. 315–317. Type locality: "Marungu (Inner Africa)."

Sciurus böhmi NOACK, 1887, Zool. Jahrb., II, pp. 251–252.

Represented by a young but adult female from Mbamibala, Marungu, 3500 feet.

MEASUREMENTS.—Collector's measurements (followed in parentheses by those of the type) are: 313 (330) × 200 (200) × 35 (35). Cranial measurements are: greatest length, 35.9; condylo-basal length, 32.2; least interorbital width, 10.1; width across post-orbital processes, 15.2; greatest length of nasals, 9.5; palatilar length, 14.2; length upper tooth row, 6.4; width, M^1, 1.7.

Claviglis microtis (Noack)

Eliomys microtis NOACK, 1887, Zool. Jahrb., Syst. Abt., II, p. 248, Pl. IX, figs. 19–22. Type locality: Qua Mpala (= Pala), Marungu. Type: B. Z. M. 6313.

One skin with skull, adult ♀, from Campea, Marungu. Alt. 4525 feet. This is near the type locality of the species.

This specimen agrees very closely with Noack's original description of the type, and in color does not closely resemble specimens from Kambove, Katanga and Ndola, Northern Rhodesia, assignable to the species. The skull of the specimen at hand (it is broken transversely across the middle) differs from the original figures of the type in its shorter muzzle and squared roots of the zygomatic arches. The Tanganyika specimens referred to in the first section of this report are cranially nearer the type than is the Marungu specimen.

MEASUREMENTS.—Adult ♀. 141 × 62 × 14 × 12.

Otomys dartmouthi dartmouthi Thomas

Otomys dartmouthi THOMAS, 1906, Ann. Mag. Nat. Hist., (7) XVIII, p. 141. Type locality: Ruwenzori East, Uganda, altitude 12,500 feet.

Represented in the Marungu (see also page 8) by a male from Kelendive, 6150 feet.

Otomys d. dartmouthi on Mount Ruwenzori is confined to the senecio zone (12,000 to 14,000 feet) but is represented at lower altitudes to the south. Thus on Mount Kandashomwa it occurs at 9000 feet, and in the Marungus at 6150 feet. Specimens in the Musée du Congo Belge, from Luofu and Kisindi near Lake Edward, are perhaps best referred to the nearly related form *O. d. thomasi*.

Lophuromys a. aquilus (True)

Mus aquilus TRUE, 1892, Proc. U. S. Nat. Museum, XV, p. 460. Type locality: Mt. Kilimanjaro.

Two Marungu specimens, a male and a female, were taken at Mukuli.

These resemble specimens from central Tanganyika referred to *L. aquilus aquilus* more than they do specimens from the Kivu (*laticeps*), the Katanga and the Ituri (*rita*) or the northern end of Lake Nyassa. These latter, although referred by Allen (1933, Bull. M. C. Z., LXXV, p. 114) to *L. a. aquilus*, differ from specimens taken to the northeast in having (in the four American Museum specimens) a strongly marked color pattern on the dorsum of the hind foot, there being an outer dark stripe matching the dorsal color of the tail, and an inner and terminal area of tawny and/or buff.

Tatera (Gerbilliscus) böhmi böhmi (Noack)

Gerbillus böhmi NOACK, 1887, Zool. Jahrb., Syst. Abt. II, p. 241, Pl. IX, figs. 11–13. Type locality: Qua Mpala [=Pala; literally "at Pala's"], Marungu.

Represented by a skin with skull of an adult female from Kinia, Marungu.

The white-tailed gerbil appears to be restricted to the Marungu region. The Congo Museum possesses a series from Albertville, which were obtained by DeRiemaeker. These specimens all differ from the Kinia specimen in having the underside of the tail completely white (instead of basally yellow); the pigmented area of the top of the tail much darker; the muzzle longer, and in being generally larger; differences not well accounted by comparative dental wear. The short distance separating Albertville from Kinia, and the comparative uniformity of the country do not merit nomenclatorial separation, when the differences involved are based on a single specimen from one of the localities.

MEASUREMENTS.—Collector's measurements: 328 × 182 × 42 × 18. Cranial measurements (those in parentheses are of an adult male, M. C. B. No. 10662 from Albertville): greatest length, 41.0 (42.7); condylo-incisive length, 36.9 (38.8); zygomatic breadth, 22.0 (22.6); skull height, 16.6 (17.9); interorbital constriction, 6.9 (7.5); breadth brain case, 17.2 (17.6); length nasals, 17.7 (18.2); breadth nasals, 4.4 (4.3); width zygomatic plate, 8.2 (8.3); palatilar length, 19.2 (19.7); length anterior palatal foramina, 8.0 (8.7); length posterior palatal foramina, 1.7 (1.4); width palate inside M^1, 3.6 (3.9); length bullae, 10.6 (10.7); width bullae, 6.9 (6.8); alveolar length upper tooth row, 7.1 (7.6); width M^1, 2.8 (2.9); condylo-incisive length of mandible, 26.7 (27.6).

[**Rhabdomys pumilio,** subspecies]

No specimens of *Rhabdomys* were secured in the Marungu by this expedition, but this is considered a fitting place to record what is probably a unique record for the genus in the Belgian Congo. The Musée du Congo Belge has the skin and skull (R. G. 11361) of a female taken at Kasiki, Marungu (altitude 2300 meters), by M. de Witte, on June, 1931.

Dasymys bentleyae medius Thomas

Dasymys medius THOMAS, 1906, Ann. Mag. Nat. Hist., (7) XVIII, p. 43. Type locality: Ruwenzori East, Uganda, 6000 feet.

Represented by a single adult female from Makuli, Marungu, 5450 feet.

The specimen here recorded differs from Ruwenzori examples of the subspecies in greater breadth of the nasals, short tooth row and in possessing a longer blacker tail. The general coloration is somewhat lighter than that dominant to the north. The subspecies has hitherto been known in the Kivu, southwestern Uganda and Albertville, on Lake Tanganyika. It has not, I believe, been recorded from the Marungus.

MEASUREMENTS.—Collector's measurements: 322 × 156 × 32 × 23. Cranial measurements: greatest length, 36.1; condylo-incisive length, 35.6; zygomatic breadth, 19.1; interorbital constriction, 4.5; length nasals, 14.7; breadth nasals, 4.8; length molar row, 7.0; width M^1, 2.5.

Oenomys hypoxanthus (near) **anchietae** (Bocage)

Mus anchietae BOCAGE, 1890, Jour. Sci. Lisboa, 1890, p. 11, Pl. I, figs. 3, 3a. Type locality: Angola.

Represented by the skin and skull of an adult male, taken at Mukuli.

This Marungu *Oenomys* differs from west African representatives of *O. hypoxanthus* in having a shorter tooth row, broader molars, long diastema and large palatal foramina. Its coat color is generally lighter than that of *O. h. hypoxanthus;* the rump darker than in *anchietae.* The hands are sandy gray instead of reddish. This specimen lacks the bright orbital ring characteristic of *O. h. anchietae,* and its ears are grayish instead of chestnut or ochraceus. The skin is in fact much like *O. oris* of the Aberdares, but the skull is distinctly different, with wider molars, a longer diastema and a narrower palate.

MEASUREMENTS.—Collector's measurements: 387 × 203 × 36 × 23. Cranial measurements: greatest length, 39.7; condylo-incisive length, 36.8; zygomatic breadth, 19.0; interorbital constriction, 5.5; length nasals, 15.5; palatilar length, 18.0; length palatal foramina, 8.8; length diastema, 11.3; width palate across M^1, 6.7; length upper molar row, 7.3; width M^1, 2.4.

Dendromus mesomelas nyasae Thomas

Dendromus nyasae THOMAS, 1916, Ann. Mag. Nat. Hist., (8) XVIII, p. 241. Type locality: Nyika Plateau, N. Nyassa, altitude 6500 feet.

Represented by the skin and skull of an adult female, from Komi, Marungu, altitude 6300 feet.

This specimen is nearly identical with a specimen from Mt. Rungwe (5650 feet), at the head of Lake Nyassa, which I presume is a good example of *D. m. nyassae.* The two differ strikingly from the two specimens of *D. m. kivu* in the American Museum (from Lulenga, Kivu District, 6000 feet) in possessing smoother, sleeker fur, a more sharply defined dorsal stripe, somewhat longer and much thinner tail, a tail which is not so white below. These differences are somewhat bridged by *D. m. insignis* of Ruwenzori.

This specimen, secured April 9, contained an embryo.

COLLECTOR'S MEASUREMENTS.—163 × ? × 21 × 10.

Cryptomys hottentotus amatus (Wroughton)

Georychus amatus WROUGHTON, 1907, Manchester Memoirs, LI (1907), No. 5, p. 28. Type locality: road to Chiwali's, Alala Plateau, Rhodesia, 4000 feet.

Represented by ten skins with skulls and one alcoholic, collected as follows: Campia, 1 female; Kasoko, 5 males, 4 females; Lake Suse, 1 male.

In color this series shows no variation except as regards extension of white and presence or absence of a rusty stain at the corners of the mouth. The amount of white on the skin appears to have no sexual or age correlation. Every specimen has a small patch of white hair on the throat at the vortex of four opposing hair tracts. In the extreme exhibited in this series white extends as a line forward to the region of the mandibular symphysis, backward as a thin line sometimes broken, or expanded to the inguinal region, and laterally to a point about a centimeter below the auditory orifice. White in some also appears as a pair of small spots, or as many as three (asymmetrical) pairs of large spots on the crown. One specimen from Kansenia, in the Congo Museum, has the entire head white. The bright rust colored hairs occur at the corners of the mouth, in some males and some females.

This species is widespread in Northern Rhodesia, and the southern Congo. I have seen specimens in the Congo Museum from Lubumbashi, Lukafu, Kansenia, Plateau de Kapiri and the confluence of the Luapula and Luambwo rivers. British Museum specimens are from the Chambezi Valley, the edge of the Chimpili Plateau, Lofu River (all Northern Rhodesia) and from the "Katanga." The larger *C. mellandi* appears not to reach the Marungu.

Whereas this subspecies is very similar to the earlier named *whytei* and *darlingi* I believe that its more inflated bullae justify recognition of its racial status.

MEASUREMENTS.—Collector's measurements of the largest male (55753) 143 × 19 × 22; of the largest female (55754) 143 × 12 × 23. Cranial measurements of a large male (55748) and a large female (55744) given in this order are: greatest

length, 33.0, 32.7; condylo-basal length, 30.8, 31.0; zygomatic breadth, 22.0, 22.2; mastoid breadth, 15.6, 16.6; median length nasals, 11.5, ?; palatilar length, 18.2, 18.6; breadth across pm^4, 6.0, 6.1; alveolar length upper tooth row, 6.4, 6.1; greatest diameter M^1, 2.0, 2.0.

Heliophobius argenteo-cinereus marungensis Noack

Heliophobius marungensis var. of *argenteo-cinereus* NOACK, 1887, Zool. Jahrb., Syst. Abt., II, p. 223. Type locality: Marungu.

Represented by nine skins with skulls and one in alcohol, collected at Kinia, Marungu, 4100 feet. All were sexed in the field as females, a determination that can be substantiated on all but two specimens, which are juvenile, by the prominent pectoral mammae.

Coloration in the series is uniform except as regards the dorsal extension of the white muzzle patch. In some specimens there is but a thin line of white above the nose, in another the white extends up to the ears, to the eyes and backward over the crown. Yet another skin has a broad tongue of white over the left eye, but no similar light area over the right.

MEASUREMENTS.—Collector's measurements of the largest specimen (55757) are: 180 × 35 × 17. Cranial measurements of the same specimen are: greatest length, 4.0; condylo-basal length, 37.5; zygomatic breadth, 27.9; interorbital breadth, 8.0; mastoid breadth, 20.0; length nasals, 14.5; alveolar length tooth row, 6.6; breadth across M^1, 6.4.

Galago senegalensis moholi A. Smith

Galago moholi A. SMITH, 1836, "App. Rept. Exped. Explor. South Africa," p. 49; 1849. "Illustr. Zool. South Africa," Mamm., text and Pls. VIII (animal) and VIII bis (anatomy). Type locality: Limpopo River, Bechuanaland (lat. 25° S.).

Represented by the skin and skull of an adult male from Lake Suse, Marungu Mountains, altitude 3850 feet.

In his recent revision of the Galagos, Schwarz (1931, Ann. Mag. Nat. Hist., (10) VII, pp. 41–66) listed no specimens from the Congo, although there were records from Abercorn, and the lower Kalungwisi River east of Lake Mueru, Northern Rhodesia localities not far removed from the Marungus. Ranging as this subspecies does from central Tanganyika to western Angola, it is not surprising to find it in the upland savannas of the southern Congo.

Pipistrellus nanus (Peters)

Vespertilio nanus PETERS, 1852, Reise nach Mossambique, I, Saugeth., p. 63, Pl. XVI, fig. 2. Type locality: Inhambani, Mozambique, lat. 24° S.

Represented by two males in alcohol from Lubenge, Marungu (altitude 5650 ft.).

The tails of these specimens are slightly longer than encountered in any of our large series of specimens from the Ituri, and the hair of the interfemoral membrane is more luxuriant than in any specimens heretofore encountered, but these differences occurring in the middle of the range of a widespread and variable species can have little or no significance.

III.—KANDASHOMWA-KIVU COLLECTION

Crocidura jacksoni denti Dollman

[*Crocidura*] *j*[*acksoni*] *denti* DOLLMAN, 1915, Ann. Mag. Nat. Hist., (8) XV, p. 516, and XVI, p. 377. Type locality: between Mawambi and Avakubi, Congo.

Represented by a single specimen in alcohol, from Kita Kita, Kivu district. This is, I believe, the first specimen of this subspecies reported from south of the equator, or from the Kivu district.

Aethosciurus ruwenzorii vulcanius (Thomas)

Sciurus ruwenzorii vulcanius THOMAS, 1909, Ann. Mag. Nat. Hist., (8) IV, p. 476.

Represented by three skins with skulls, all of adult males secured on Kandashomwa Mountain, at 7650 feet.

The rufus-footed Kivu subspecies of the snow-bellied mountain squirrel is represented in the American Museum collection from as far north as a point five miles south of Lubango, west of Lake Edward, and from as far south as Kandashomwa. As would be expected, the coloration at the southern edge of this range is more intensely reddish than that at the northern, where a yellower tint, approaching that of the Ruwenzori form, is found.

Tamiscus vulcanorum vulcanorum Thomas

Tamiscus vulcanorum vulcanorum THOMAS, 1918, Ann. Mag. Nat. Hist., (9) I, p. 35. Type locality: Buhamba, near Lake Kivu.

Represented by one adult male and an adult female, taken at Luvamba, on the Lusigi River, three days south and west of Mt. Kandashomwa, altitude 6400 feet.

It is interesting to find that the range of this form extends down the highland chain to the west of Lake Kivu, out of which district it has not hitherto been reported.

Tamiscus alexandri (Thomas and Wroughton)

Funisciurus alexandri THOMAS AND WROUGHTON, 1907, Ann. Mag. Nat. Hist., (7) XIX, pp. 376–377. Type locality: Gudima, Iri River, Upper Welle.

Represented by a young adult female from Mulolo, three days west of Kisali, on the Elila River, Kivu district. This appears to be the first Kivu district record for the species.

Protoxerus stangeri notabilis Thomas

Protoxerus stangeri notabilis THOMAS, 1923, Ann. Mag. Nat. Hist., (9) XI, p. 528. Type locality: Avakubi, Ituri region of Upper Congo.

Represented by a single adult female from Kita Kita, three days south of Kama on Kama River, Kivu district. This is a richly colored specimen, which matches well the topotypes in the American Museum collections.

There are four pairs of mammae, evenly spaced from axilla to groin.

Anomalurus jacksoni fortior Lönnberg

Anomalurus jacksoni fortior LÖNNBERG, 1917, Kungl. Sv. vetensk Akad. Handl., LVIII, No. 2, p. 66. Type locality: Masisi, near Kivu, Central Africa.

Represented by an incomplete skin and partial skeleton of an adult male, taken at Luvumbra, Lusigi River, Congo.

Otomys dartmouthi dartmouthi Thomas

Otomys dartmouthi THOMAS, 1906, Ann. Mag. Nat. Hist., (7) XVIII, p. 141. Type locality: Ruwenzori East, Uganda, altitude 12,500 feet.

Represented in the district here considered (see also p. 4) by two females, one skin with skull, one in alcohol, from Kandashomwa Mountain, at 9550 feet.

Notes relating to the form will be found under the account of a specimen from the Marungu.

Lophuromys aquilus (True)

Mus aquilus TRUE, 1892, Proc. U. S. Nat. Museum, XV, p. 460. Type locality: Mt. Kilimanjaro, Tanganyika Territory.

Represented in this series by but one specimen from Kandashomwa Mountain, at 9000 feet. It is far less nigrescent than any of a large series of topotypes of the Kivu subspecies, *L. a. laticeps*, and cannot, in fact, be distinguished from Tanganyika Territory specimens referred to *L. a. aquilus*.

Cephalophus natalensis kivuensis Lönnberg

Cephalophus nigrifrons kivuensis LÖNNBERG, 1919, Rev. Zool. Afric., VII, p. 165. Type locality: "Région du lac Kivu."

Cephalophus natalensis kivuensis GYLDENSTOLPE, 1928, Arkiv för Zoologi, Bd. 20A, N:o 4, p. 64.

Represented by two skins without skulls from Kandashomwa Mountain.